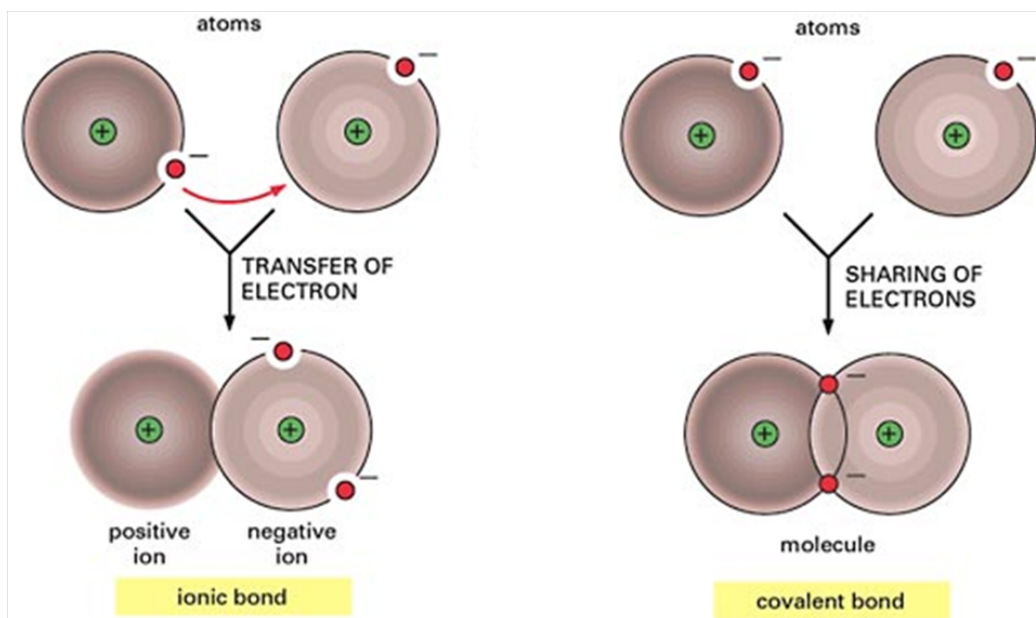
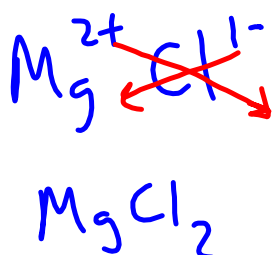


- Diatomic Molecules:
  - Formed between two atoms of the same element covalently bonded together.
  - There are elements that do not exist alone, so they must bond to something.
  - Br I N Cl H O F
  - Exist in nature as  $\text{Br}_2$ ,  $\text{I}_2$ , ...



Metal + Non-metal  
(1 or more of each  
of these)

Two (or more)  
Non-metals



Cross-cross gives the number  
of atoms of each element that  
is necessary for compound to form.

- Metallic Bonding:
  - Between two or more metals of either same element or different elements
  - All metals give away  $e^-$
  - Don't transfer  $e^-$  to another specific atom; rather the  $e^-$  move freely between atoms

- Naming Transition Metals:

- Need an extra identifier

- Ex:  $\text{Cu} \rightarrow 2+, 1+$

- $\text{Cu}^{2+} \rightarrow \text{Copper (II)}$

- $\text{Cu}^{1+} \rightarrow \text{Copper (I)}$

- Activity:

- Gold  $\rightarrow$  Gold (I) or Gold (III)

- Silver